

MITIGATION IMPLEMENTATION AND MONITORING PLAN PARADISE AREA REINFORCEMENT PROJECT

INTRODUCTION

The Paradise Area Reinforcement project is proposed by Pacific Gas and Electric Company (PG&E) to provide additional capacity to the Paradise area, which includes the town of Paradise and other nearby unincorporated communities. The proposed project is located within portions of unincorporated Butte County, and the Town of Paradise. In unincorporated Butte County, the southern end of the proposed route begins at the Table Mountain-Butte 115kV power line. From the existing Table Mountain-Oroville 115kV power line, the proposed power line would head north, paralleling a PG&E gas pipeline, Neal Road, and the Centerville-Table Mountain-Oroville 60kV power line to Skyway. At Skyway, the route turns east and continues along Skyway as it enters the incorporated Town of Paradise. As the route approaches the intersection of Neal Road, it will head northeast along the Paradise Memorial Trailway until it enters the Paradise Substation, approximately 500 feet north of Elliot Road.

The new 115kV power line would extend between the existing Table Mountain-Butte #3 115kV line (the source of the 115kV power) and the Paradise Substation. It would be approximately 6.1 miles long and the corridor would be up to 85 feet wide. The entire route primarily follows existing utility right-of-way (ROW) corridors or road ROWs. The proposed project also involves upgrading the Paradise Substation from a 60kV to a 115kV operating system.

An Initial Study was prepared to assess the potential effects on the environment from the various components of the proposed project. The Initial Study was prepared based on information in the Proponent's Environmental Assessment (PEA), a project site visit, and supplemental research. The majority of the proposed project's impacts would occur during project construction, as a result of disturbance caused by construction activity. Within PG&E's Application, mitigation measures addressing potentially significant impacts were proposed to reduce potentially adverse impacts related to project construction.

The purpose of this Mitigation Implementation and Monitoring Plan is to ensure that the required mitigation measures are adequately implemented. This plan includes specific actions to be taken to implement each mitigation measure, and information on monitoring requirements and the timing of implementation (see Table C-1). This plan includes:

- The Agency Recommended Measures, which PG&E must implement as part of the proposed project, followed by the Applicant Proposed Measures that PG&E has made part of the proposed project and is responsible for implementing.
- The actions required to implement these measures,
- Monitoring requirements, and
- Timing of implementation for each measure.

Field monitoring of the mitigation measures during construction shall be carried out by a CPUC-designated environmental monitor. In all instances where non-compliance occurs, the CPUC's designated environmental monitor shall issue a warning to the construction foreman and PG&E's project manager. Continued non-compliance shall be reported to the CPUC's designated project manager. Any decisions to halt work due to non-compliance shall be made by the CPUC. The CPUC's designated environmental monitor shall keep a record of any incidents of non-compliance with mitigation measures. Copies of these documents shall be supplied to PG&E and the CPUC.

Table C-1 Mitigation Implementation and Monitoring Plan

Impact	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
AGENCY RECOMMENDED MEASURES				
Air Quality				
Disposing plant debris by controlled burning.	III-1: All plant debris generated by clearing and pruning activities during construction and operation of the proposed project shall be disposed of in a manner other than controlled burning.	PG&E to clear and prune as described	CPUC Environmental Monitor site visit to verify compliance.	During construction
Biology				
Disturbance of nesting birds protected under the Migratory Bird Treaty Act	IV-1: Where feasible, tree trimming and removal of shrubs and trees should be avoided during the nesting period of March through July. PG&E shall submit a plan to CPUC outlining the criteria and conditions that would make tree trimming and removal of shrubs and trees necessary within the said nesting period. The plan shall also provide specific procedures that PG&E will follow prior to and during trimming activities to ensure that impacts associated with disturbance of birds protected under the Migratory Bird Treaty Act are less than significant.	PG&E to submit Vegetation Management Plan to CPUC prior to project operations	CPUC to review and approve PG&E's Vegetation Management Plan	Prior to operations
Cultural Historic Resources				
Degradation of previously unidentified cultural materials and/or features	V-1: If previously unidentified cultural materials and/or features are discovered during construction, all work in the immediate area will cease, and PG&E's Cultural Resources Specialist and CPUC's Environmental Monitor will be immediately contacted for identification and evaluation. In accordance with Article 5, Section 15064.5.f. of the CEQA Guidelines, the specialist shall prepare a site-specific mitigation plan if the materials and/or features are determined to be significant and cannot be avoided. The mitigation plan shall be subject to review and approval by local, State, and Federal agencies before any archaeological mitigation construction begins. If human remains are encountered, PG&E's Cultural Resources Specialist and the County Coroner will be contacted for identification and appropriate measures will be undertaken in accordance with Article 5, Section 15064.5.e of the CEQA Guidelines.	PG&E to provide training and document (with agenda and list of attendees) to CPUC	CPUC to review documentation; CPUC Environmental Monitor site visit to verify compliance.	Prior to and during construction
Potential degradation of cultural resources at new staging areas in undeveloped areas	V-2: In the event that PG&E needs to use land in undisturbed areas that it does not own for laydown or staging areas off the power line ROW, PG&E will be required to conduct all required surveys with appropriate mitigation consistent with the applicant proposed measures listed in Table B-1 of the Initial Study to reduce all impacts associated with development of the laydown or staging area to non-significant levels. Survey reports and proposed mitigation actions shall be submitted to the CPUC for review and approval. The site may not be used by PG&E until PG&E has demonstrated to the CPUC that its action will reduce all potential impacts to a level that would be less than significant.	PG&E to provide reports to CPUC	CPUC to review and approve PG&E's survey reports.	Prior to or during construction
Public Services				
Potential impacts associated with the degradation of the Memorial Trailway	XIII-1: PG&E shall submit a report to the Town of Paradise which describes plans to accomplish the Town of Paradise's objectives to preserve the integrity and strength of the surface of the Memorial Trailway. The report shall be submitted to the Town of Paradise Public Works Department and the CPUC at least 30 days prior to the planned construction start date. Construction will not be allowed to commence along Segment 5 until the CPUC is satisfied that PG&E has addressed the concerns of the Town of Paradise regarding the trailway surface. At conclusion of project construction, the CPUC mitigation monitor will verify that all construction damage to the surface has been professionally repaired.	PG&E to provide report to the Town of Paradise and the CPUC	CPUC to review and approve PG&E's report.	Prior to construction

APPLICANT PROPOSED MITIGATION MEASURES				
Air Quality				
Fugitive construction emissions	MM 4-1: All personnel working on the project will be trained prior to starting work on methods for minimizing air quality impacts during construction.	PG&E to provide training and document (agenda and list of attendees) to CPUC	CPUC to review documentation	Prior to construction
Construction PM ₁₀ emissions	MM 4-2: Although the fugitive dust associated with project construction is insignificant relative to the ambient PM ₁₀ levels, the following measures have been incorporated into the project to ensure PM ₁₀ emissions are minimized during construction activities: <ul style="list-style-type: none"> • All construction areas, unpaved access roads, and staging areas will be watered as needed during dry soil conditions, or soil stabilizers will be applied. • All trucks hauling soil and other loose material will be covered or have at least two feet of freeboard. Construction vehicles will use paved roads to access the construction site wherever possible. • Vehicle speeds will be limited to 15 mph on unpaved roads and construction areas, or as required to control dust. • Streets will be cleaned daily if visible soil material is carried onto adjacent public streets. • Soil stabilizers will be applied to inactive construction areas on an as needed basis. • Exposed stockpiles of soil and other excavated materials will be enclosed, covered, watered twice daily, or applied with soil binders as needed. • Vegetation will be replanted in disturbed areas as quickly as possible following the completion of construction. 	PG&E to operate as described	CPUC Environmental Monitor site visit to verify compliance.	During construction
Construction vehicle emissions	MM 4-3: Although short-term construction vehicle emissions are minimal relative to the ambient emission levels and would not result in significant impacts, the following measures will be incorporated into the project to reduce emissions during construction activities: <ul style="list-style-type: none"> • Carpooling will be encouraged among construction workers through contractor bid specifications and project orientation training for workers. • Vehicles used in construction activities will be tuned per the manufacturers' recommended maintenance. • Vehicle idling time will be minimized. 	PG&E to document in letter to CPUC	CPUC to review letter	Before start of construction
Biological Resources				
Disturbance of special status plants that bloom in April or May.	MM 5-1: PG&E will provide a qualified botanist to survey the proposed power line in Butte County for special-status plants that bloom in April or May and that may occur in the project area. Based on the presence of suitable habitat, these species include Butte County fritillary (<i>Fritillaria eastwoodiae</i>), Red Bluff dwarf rush (<i>Juncus leiostermus</i> var. <i>leiostermus</i>) and veiny monardella (<i>Monardella douglasii</i> ssp. <i>venosa</i>). A survey is not required in the Town of Paradise because no suitable habitat for these species is found in the Town of Paradise limits along the power line route.	PG&E to perform surveys & submit survey report to CPUC, documenting avoidance proposals	CPUC Environmental Monitor to verify surveys; CPUC to review documentation	Prior to construction

	<p>If any of these or any other special-status species are found in the power line route, PG&E will ensure avoidance of these populations through one or more of the following techniques:</p> <ul style="list-style-type: none"> • Relocating power poles or laydown areas • Careful removal of canopy trees • Temporary construction fencing • Construction worker training and construction monitoring by a qualified botanist <p>The method(s) used to avoid populations of special-status plants will be proposed by PG&E Technical and Ecological Services and approved by the California Department of Fish and Game prior to implementation. If populations of special-status plants cannot be avoided, PG&E will modify the project to minimize impacts to special-status plants. In addition, PG&E will design and conduct mitigation for direct impacts to special-status plants in proportion to the status and rarity of the species and the magnitude of the impact. Such mitigation will be approved prior to implementation by the CDFG and the CNPS.</p>			
Disturbance of special-status birds or birds protected by the Migratory Bird Treaty Act	<p>MM 5-2: If construction of the proposed project occurs outside the nesting season for special-status birds or birds protected by the Migratory Bird Treaty Act (i.e., if construction does not occur between March and July), no pre-construction mitigation will be required. If construction takes place during the nesting season for any of the species listed in Table 5-6 or for species protected under the Migratory Bird Treaty Act, pre-construction surveys should be conducted in late winter (February-March) to locate nests that could be destroyed during construction. These nests should be avoided, if possible. If they cannot be avoided nests should be removed before the adults return and begin reproduction.</p> <p>The wooden poles along Segments 4 and 5 that would be removed should be surveyed at the same time for evidence of cavities used by cavity nesting birds. Any cavities should be inspected thoroughly to insure that they harbor no wildlife. If a cavity is empty, it should be covered with sheet metal to prevent nesting. The wooden poles should be inspected shortly before removal to determine whether a cavity used by nesting birds is present at the time of construction (despite precautions taken). If a nest is present, the pole should be left in place until nesting is complete, if possible. If this is not possible, the section of pole containing the cavity should be mounted at a similar height on a pole set nearby.</p>	PG&E to survey wood poles and document findings in a letter to CPUC	CPUC Environmental Monitor to verify surveys; CPUC to review documentation	Prior to construction
Disturbance of special-status amphibians	<p>MM 5-3: In order to assess the impacts on special-status amphibians, habitat assessments will be conducted prior to construction activities. Due to the seasonal nature of the water courses, habitat assessments and surveys should be completed immediately prior to construction activities rather than during a previous year or alternate season to best assess true impacts on a species. Based on the results of the initial habitat assessments, species-specific surveys may be completed. In any case and regardless of the results of the surveys, impacts to any identified special-status species will be avoided or at least minimized to a level of no significance by implementing the mitigation procedures described below.</p>	PG&E to perform surveys and document findings in a letter to CPUC	CPUC to review report	Prior to construction
Disturbance of riparian habitat along Segment 3.	<p>MM 5-4: To reduce impacts to the riparian habitat along Segment 3, the width of the clearing required for vehicles will be minimized. After construction, the area disturbed will be revegetated with native species found in that drainage to a condition similar to that found prior to disturbance. The noxious plant Himalayan blackberry will be removed from the revegetation site and from up to 25 feet from the revegetation areas. The revegetation will be designed, conducted, and monitored by a qualified botanist or revegetation specialist. Impacts to riparian and freshwater seep vegetation in the northern and southern tributaries of Nance Creek (Segment 3) will be avoided. Construction equipment will cross these drainages in areas devoid of vegetation.</p>	PG&E to submit revegetation proposal and document completed revegetation actions	CPUC to review report	After construction

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	If disturbance to vegetation cannot be avoided, vegetation will be restored to pre-construction conditions under the direction of a qualified specialist in wetland restoration.			
Spreading or introducing noxious plants in the project area	MM 5-5: To reduce the chance of spreading or introducing noxious plants in the project area, PG&E will ensure that all construction vehicles are thoroughly washed prior to entering wildlands (i.e., prior to going off-road). In the growing season after construction, a qualified biologist will survey the power line corridor for new infestations of yellow star thistle or substantial new infestations of any other noxious weeds, including those listed in Table 5-2. If such infestations are found, PG&E will eradicate them using proven methods such as herbicides or biological control agents. PG&E will coordinate these efforts with the Butte County Department of Agriculture.	PG&E to survey for Thistle, and document subsequent actions in a letter	CPUC to review report	Prior to construction
Destruction of active nests of bird species that are either special-status or protected by the Migratory Bird Treaty Act	MM 5-6: To prevent destruction of active nests of bird species that are either special-status or protected by the Migratory Bird Treaty Act, all trees and shrubs should be removed outside the nesting season (i.e., vegetation removal for the project should take place between August and February).	PG&E to submit letter report documenting removal timing	CPUC to review report	Prior to and during construction
Loss of biological diversity and the spread of French broom on the Paradise Memorial Trailway	MM 5-7: To mitigate loss of biological diversity and to prevent the further spread of French broom on the Paradise Memorial Trailway, PG&E will develop a vegetation management plan in consultation with the Town of Paradise to reduce the amount of this noxious weed present.	PG&E to submit vegetation management plan to CPUC & Town of Paradise	CPUC to review report	Prior to construction
Disturbance of pallid bat roosts during winter hibernation or during reproduction	MM 5-8: To reduce the chance of affecting pallid bat roosts during winter hibernation or during reproduction, if hollow trees are to be removed, they will be inspected first to insure that no bat roosts are present. Removal of a tree that provides roosting cover will be delayed until the tree can be removed without impacts to pallid bats. Trees containing bats will not be removed until they are unoccupied.	PG&E shall inspect trees for bats	CPUC Environmental Monitor to verify inspections;	Prior to construction
Disturbance of the valley elderberry longhorn beetle.	MM 5-9: PG&E will comply with Endangered Species Act requirements for mitigating impacts to valley elderberry longhorn beetle. PG&E will avoid and protect the habitat whenever possible in the “core” and “buffer zones.” The core area is within 20 feet of the dripline of any elderberry plants; the buffer zone is within 100 feet of any elderberry plant. Protective measures to be followed are: <ul style="list-style-type: none"> Fence and flag all areas to be avoided. Provide a minimum construction setback of at least 20 feet from the dripline of each elderberry plant and a minimum setback from vegetation clearing of 100 feet from any elderberry plant. Brief all workers on the need to avoid damaging the elderberry plants and the possible penalties for not complying with these requirements. Put up signs identifying the location of the habitat to be avoided. Restore damage done, including providing erosion control and revegetating with appropriate native species No pesticides or fertilizers should be used in the core and buffer areas. 	PG&E shall comply with all terms	CPUC Environmental Monitor site visit to verify compliance.	Prior to and during construction

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	Where it is not possible to avoid elderberry plants, they shall be transplanted if they are likely to survive the transplant effort. For every elderberry stem that is 1.0" or greater in diameter at ground level that is adversely affected, mitigation acceptable to the USFWS will be developed. All necessary permits will be obtained, in consultation with USFWS.			
Disturbance of no special-status biological resources	MM 5-10: Should construction activity become necessary outside of the biological resources survey area identified above (Section 5.1), any affected areas will be surveyed by a qualified biologist prior to initiating the activity in order to ensure that no special-status biological resources will be impacted.	PG&E shall complete surveys and submit letter report to CPUC	CPUC to review report	Prior to construction
Disturbance of riparian vegetation along Segment 3	MM 5-11: To avoid further disturbance to riparian vegetation along Segment 3, maintenance access to the proposed 115kV power line and the existing 60kV power line will be from Neal Road and Skyline Boulevard but will not cross Nance Creek between the two access points except in emergencies. Vehicles will cross tributaries to Nance Creek only in areas devoid of vegetation.	PG&E to submit letter describing maintenance access proposal	CPUC to review letter	Prior to construction
Cultural and Historic Resources				
Degradation of the train depot	MM 6-1: The train depot and immediate vicinity shall be spanned by the power line if practicable to avoid potential indirect impacts to this structure.	PG&E to submit pole location design to CPUC	CPUC to review proposed pole locations	Prior to construction
Degradation of cultural resource	MM 6-2: Prior to construction, all construction personnel will receive environmental training. Training will emphasize the importance of the cultural resource sites in the vicinity and discuss the possibility that previously unidentified cultural resources may become apparent during ground-disturbing activities, and how to respond if they are discovered.	PG&E to provide training and document (with agenda and list of attendees) to CPUC	CPUC to review documentation	Prior to construction
Degradation of previously unidentified cultural materials and/or features	MM 6-3*: If previously unidentified cultural materials and/or features are discovered during construction, all work in the immediate area will cease, and PG&E's Cultural Resources Specialist and CPUC's Environmental Monitor will be immediately contacted for identification and evaluation. In accordance with Article 5, Section 15064.5.f. of the CEQA Guidelines, the specialist will determine appropriate mitigation measures if the materials and/or features are determined to be significant and cannot be avoided. If human remains are encountered, PG&E's Cultural Resources Specialist and the County Coroner will be contacted for identification and appropriate measures will be undertaken in accordance with the Native American Graves Protection and Repatriation Act (NAGPRA) and Article 5, Section 16054.5.e of the CEQA Guidelines.	PG&E to provide training and document (with agenda and list of attendees) to CPUC	CPUC to review documentation; CPUC Environmental Monitor site visit to verify compliance.	Prior to and during construction
Degradation of potential cultural resources located outside of the survey area identified	MM 6-4*: Should ground disturbing activity become necessary outside of the cultural resources survey area identified above (Section 6.1), any affected areas will be surveyed by PG&E's Cultural Resources Specialist and CPUC's Environmental Monitor prior to initiating the activity in order to ensure that no cultural resources sites will be impacted.	PG&E to submit survey report to CPUC	CPUC to review report	Prior to construction in areas outside of survey area
Utilities and Service Systems				
Disruption of other utilities	MM 7-1: Mitigation measures will ensure that impacts to other utilities will be less than significant: <ul style="list-style-type: none"> PG&E will conduct surveys prior to construction to locate underground and overhead utilities. All utilities near project facilities will be put on the construction plan maps. During construction, before any ground disturbance occurs, Underground Service Alert (USA) will be contacted to verify the location of existing underground utilities. Representatives from non-PG&E utilities will be notified in advance of construction if construction will be occurring near their lines, and PG&E will coordinate with them. 	PG&E to comply with stated requirements	CPUC to review documentation; CPUC Environmental Monitor site visit to verify compliance.	Prior to and during construction

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	<ul style="list-style-type: none"> PG&E will locate poles and string conductors at a safe distance from intersecting and adjacent power line structures, conductors, and telephone wires in accordance with the distances specified in the CPUC General Order No. 95. 			
Geology and Soils				
Slope instability	MM 8-1: A geologist or geotechnical engineer will evaluate slope stability and assist in selection of power line pole locations in steep slope areas to eliminate or minimize potential impacts from landslides, rock falls, or other slope instability. All poles will conform with the structural requirements of the CPUC's General Order 95.	PG&E to submit letter describing areas of geologic concern and actions taken	CPUC to review report	Prior to construction
Soil instability	MM 8-2: Over excavation and replacement with engineered fill or other ground treatment will be implemented where necessary.	PG&E to comply during construction	CPUC Environmental Monitor site visit to verify compliance	During construction
Hydrology and Water Quality				
Erosion and sediment transport	<p>MM 9-1: PG&E will prepare an erosion and sediment transport control plan that will be submitted to Butte County and the Town of Paradise along with the grading permit application. This plan will follow the standards in the Manual of Erosion and Sedimentation Control Measures (ABAG 1981), and practices recommended by the Natural Resources Conservation Service. Implementation of the plan will stabilize graded areas and waterways, and minimize erosion and sedimentation. The plan will designate Best Management Practices (BMPs) for construction. The construction crews will install erosion controls such as hay bales, water bars, covers, sediment fences, sensitive area access restrictions (e.g., fencing), vehicle mats in wet areas, and retention/settlement ponds where necessary and appropriate before initiating extensive clearing and grading. Subsequent mulching, seeding, or other suitable stabilization measures will protect exposed areas during, and subsequent to, construction activities.</p> <p>A workers' training program will be established to communicate environmental concerns and appropriate work practices to all field personnel. A construction monitoring program will ensure that the plans are followed throughout construction.</p>	PG&E to submit plan and conduct training (documented by submittal of agenda and attendee list)	CPUC, Butte County, Town of Paradise to review plan; CPUC Environmental Monitor site visit to verify compliance	Prior to construction
Accidental spills	<p>MM 9-2: PG&E will prepare a Hazardous Substance Control and Emergency Response Plan that will include preparations for quick and safe cleanup of accidental spills. This plan will be submitted with the grading permit application. The plan will prescribe procedures for reducing the potential for significant impacts to surface and ground water in the unlikely event of an oil spill, prescribe methods for safe collection and disposal of hazardous substances generated during construction activities, and include an emergency response program to ensure quick and safe cleanup of accidental chemical spills. The plan will identify areas where refueling and vehicle maintenance activities, temporary storage of unused concrete, and storage of hazardous materials will be permitted.</p> <p>A workers' education program will be established for all field personnel prior to initiating fieldwork to provide training in appropriate spill response methods. A monitoring program will be established to ensure that the plans are followed.</p> <p>The existing SPCC containment system will be used at the substation to retain a release in the extremely unlikely event of a catastrophic failure of oil-filled electrical equipment during equipment removal, installation, or operation. Additionally, oil-absorbent material, tarps, and storage drums may be used to</p>	PG&E to submit plan and conduct training (documented by submittal of agenda and attendee list)	CPUC, Butte County, Town of Paradise to review plan; CPUC Environmental Monitor site visit to verify compliance	Prior to construction

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	contain and control any minor releases. Excess water and liquid concrete that escapes the pole foundation pours will be directed to bermed areas adjacent to the borings where the water will infiltrate or evaporate and the concrete will remain and begin to set. Once the excess concrete has been allowed to set up (but before it is dry), it will be removed and recycled or transported to an approved landfill for disposal.			
Runoff from new access roads	MM 9-3: New dirt and gravel power line access roads are proposed in rural, undeveloped areas where waterways occur. No culverts or outfalls exist in the vicinity of the proposed roads. Best Management Practices for road construction in watershed areas, including water bars and detention basins, will be used to manage runoff volumes and rates as closely as possible to pre-project conditions. At each pole site, a concrete foundation approximately six feet in diameter and up to 16 feet deep will be constructed. This impervious material will restrict stormwater infiltration within the foundation footprint. However, impact from construction of the pole foundations will be insignificant, because the total area impacted by pole foundations will be very small.	PG&E to construct as described	CPUC Environmental Monitor site visit to verify compliance	During construction
Accidental spills and releases	MM 9-4: PG&E will revise their Spill Prevention, Countermeasure, and Control (SPCC) plan for the Paradise Substation in response to alterations due to the proposed project. The plans will include engineered methods for containing and controlling any oil release (e.g., retention pond, mote, berms, or some combination), and preparations for a quick and safe cleanup. The plan will be submitted to Butte County for review.	PG&E to submit Plan to CPUC and Butte County	CPUC and Butte County to review plan	Prior to construction
Land Use				
Construction impacts to adjacent land uses	MM 10-1: Prior to construction, PG&E will notify landowners immediately adjacent to proposed construction about construction activities. The notice will contain information about the timing and nature of the activities. A PG&E contact person will be designated and a telephone number and address provided to the notified parties to allow them to obtain information and comment about project construction.	PG&E to provide CPUC with a copy of the advanced notice for review and approval. PG&E shall also provide the CPUC with documentation of mailing a 72-hour advance notice to all businesses and residents and document attempts in person or telephone follow up.	CPUC to review notice	Prior to construction
Noise				
Construction equipment noise	MM 11-1: Compressors and other small stationary equipment will be shielded with portable barriers as necessary to reduce noise to nearby receptors.	PG&E to implement as defined	Environmental Monitor site visit to verify compliance	During construction
Construction equipment noise	MM 11-2: "Quiet" equipment (i.e., equipment that incorporates noise control elements into the design; compressors and jackhammers have "quiet" models) will be used during construction.	PG&E to implement as defined	Environmental Monitor site visit to verify compliance	During construction
Construction equipment noise	MM 11-3*: Equipment exhaust stacks/vents will be directed away from buildings when feasible.	PG&E to implement as defined	Environmental Monitor site visit to verify compliance	During construction

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Truck traffic noise	MM 11-4: Truck traffic will be routed away from noise-sensitive areas where feasible.	PG&E to implement as defined	Environmental Monitor site visit to verify compliance	During construction
Construction equipment noise	MM 11-5: Temporary sound barriers or sound curtains will be employed, if necessary, under the following conditions: <ul style="list-style-type: none"> Construction within 100 feet of businesses Sensitive receptors will be exposed to construction noise for more than one day 	PG&E to implement as defined	Environmental Monitor site visit to verify compliance	During construction
Noise associated with substation operations	MM 11-7: Design specifications for the proposed transformers must meet or exceed 45 MVA, 115/12kV transformers will meet 69 dBA, OA rating and 72 dBA, FA rating.	PG&E to implement as defined	Environmental Monitor site visit to verify compliance	Prior to construction
Noise associated with substation operations	MM 11-8: To achieve lower nighttime noise, the new transformer may be operated at reduced loading and without fan cooling between the hours of 10:00PM and 7:00AM.	PG&E to implement as defined	Environmental Monitor site visit to verify compliance	Prior to construction
Public Health and Safety				
Fire hazard	MM 12-1: PG&E vehicles used in construction activities will be equipped with portable fire extinguishers weighing five pounds or more, and/or a five gallon, back carried extinguisher. In addition to any requirements imposed by the Butte County and Paradise Fire Departments, the following measures will be implemented during the construction of the power line: <ul style="list-style-type: none"> In accordance with the 1994 Uniform Fire Code Section 1109.5, PG&E will inform its construction and maintenance workforce that "Lighted matches, cigarettes, cigars or other burning objects shall not be discarded in such a manner that could cause ignition of other combustible material." Any motor, engine, welding equipment, cutting torch, grinding device or equipment from which a spark, fire or flame may originate will not be used without first (a) clearing away all flammable material for a distance of 10 feet, and (b) having on hand a round-point shovel with an overall length of not less than 46 inches and a water-filled backpack pump fully equipped and ready to use. This does not apply to power saws and other portable tools powered by a gasoline-fueled internal combustion engine (Public Resources Code 4427). Any portable gasoline-powered tool (chainsaws, etc.) will not be used within 25 feet of any flammable materials without providing one round-point shovel with an overall length of not less than 46 inches or a fire extinguisher having a rating of 2-BC or larger. The fire tools must be unobstructed and within 25 feet of the tool operation at all times (PRC 4431). Motor vehicles will not be parked or operated outside of cleared work areas except for the specific purpose of vegetation clearing. Construction equipment and fire fighting equipment shall meet the following requirements: <ul style="list-style-type: none"> The exhausts of all equipment powered by gasoline, diesel, or other hydrocarbon fuel will be equipped with effective spark arrestors. The spark arrestor must prevent the escape from the exhaust of carbon or other flammable 	PG&E to implement as defined	Environmental Monitor site visit to verify compliance	During construction

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	<p>particles over 0.0232 of an inch.</p> <ul style="list-style-type: none"> Motor trucks, truck tractors, buses, and passenger vehicles, except motorcycles, are not subject to this provision if their exhaust systems are equipped with mufflers (PRC 4442). In addition to the requirements of PRC 4427 described above, all welding rigs shall be equipped with a minimum 20 lb. (or 2-10 lb.) fire extinguisher and a minimum of 5 gallons of water in a fire-fighting apparatus. 			
Fire hazard	MM 12-3: PG&E will adhere to the CPUC's General Order No. 95 concerning the requirements for maintaining appropriate tree clearances from power line facilities. PG&E will conduct routine surveillance of the power line, monitoring tree growth to ensure that safety and operation requirements are adhered to.	PG&E to implement as defined	Environmental Monitor site visit to verify compliance	After construction
Hazardous materials and waste handling	MM 12-4: PG&E shall update the Hazardous Material Business Plan and SPCC Plan as needed, and will employ proper use, storage and disposal methods for hazardous materials and wastes. (See MM 9-2 for additional hazardous waste mitigation efforts.)	PG&E to provide submit Plan for CPUC review	CPUC to review plan	Prior to construction
Transportation and Traffic				
Lane closures during construction	MM 14-1: <ul style="list-style-type: none"> Construction activities shall occur on road shoulders or in non-traffic lanes, where feasible, to avoid unnecessary lane closures. Coordination shall occur between PG&E and the Butte County and Town of Paradise Departments of Public Works to minimize conflicts with the design, location, and construction of other projects. PG&E shall notify Town of Paradise and Butte County residents of scheduled lane closures. PG&E shall use traffic control personnel during lane closures. Standard traffic control techniques will include flagmen, warning signs, cones, and lights. 	PG&E to implement as defined; provide CPUC documentation of coordination with local agencies	Environmental Monitor site visit to verify compliance; CPUC to review coordination documentation	Prior to and during construction
Blocked access to residences and properties	MM 14-2: Access to all residences and properties near the project will be maintained at all times.	PG&E to implement as defined	Environmental Monitor site visit to verify compliance	During construction
Damage to public roads	MM 14-3: PG&E will repair and restore damage to public roads and nearby areas caused by project construction.	PG&E to implement as defined	Environmental Monitor site visit to verify compliance	After construction
Disturbances to bus schedules	MM 14-4: <ul style="list-style-type: none"> The Butte County Transportation Authority shall be notified of lane closures that will potentially affect bus stops in the project area. The Paradise Unified School District and the Town of Paradise shall be notified of lane closures that will potentially affect bus stops in the project area. 	PG&E to implement as defined; provide CPUC documentation of coordination with local agencies	Environmental Monitor site visit to verify compliance; CPUC to review coordination documentation	Prior to and during construction
Lane and trail closures	MM 14-5: <ul style="list-style-type: none"> PG&E will notify Town of Paradise residents of scheduled lane closures. Signs will be placed at the main trailway crossroad points (Neal Road, Foster Road, Fir Road, and Elliot Road) notifying Trailway users of trail closures. 	PG&E to implement as defined; provide CPUC documentation that residents were notified	Environmental Monitor site visit to verify compliance; provide CPUC documentation that residents were notified	Prior to construction

Visual Resources				
Reflection and sunlight	<p>MM 15-1: To reduce the potential for reflection of sunlight from project facilities, reduce color contrasts, and visually unify the project with the surrounding characteristic landscape, PG&E will:</p> <ul style="list-style-type: none"> Throughout the project area, though not standard practice, use only non-specular conductors that do not reflect sunlight. As seen from the Paradise Memorial Trailway and Skyway, use self-weathering steel poles. Self-weathering steel poles will oxidize over time thereby reducing reflection and color contrasts. 	PG&E to implement as defined	Environmental Monitor site visit to verify compliance	Prior to and during construction
Power line poles along Paradise Memorial Trailway	<p>MM 15-2: To reduce the number of power line poles along the Paradise Memorial Trailway, PG&E will coordinate the placement of poles to accommodate existing service lines as much as possible.</p>	PG&E to implement as defined; provide CPUC documentation that PG&E coordinated with other utilities	Environmental Monitor site visit to verify compliance; provide CPUC documentation that residents were notified	Prior to construction
Power pole scale, loss of shade, loss of privacy to residences along Paradise Memorial Trailway	<p>MM 15-3*: To reduce the perceived scale of power poles, to compensate for the loss of shade, and to mitigate for the loss of privacy to adjacent residences along the paved portions of the Paradise Memorial Trailway, PG&E will:</p> <ul style="list-style-type: none"> Prior to project construction, prepare revegetation planting plans and specifications in coordination with the Town of Paradise. Emphasize design goals of using native shrubs of sufficient height to screen the trail user from adjacent land uses; provide low trees that could be easily maintained to reflect power line maintenance and fire management guidelines yet also provide shade on the trail; and screen the base of the power line poles as seen from the trail. During the first spring after project construction, implement revegetation designs. Maintain plants, until re-established, for a two-year establishment period. 	PG&E to implement as defined	Environmental Monitor site visit to verify compliance	Prior to and after construction
Vegetation clearing and pruning	<p>MM 15-4*: To reduce the need for vegetation clearing and pruning along the Paradise Memorial Trailway and Neal Road, PG&E will site power line poles such that conductors use the clear space along the trail and roadway as much as practicable. PG&E will site power line poles away from the trail as much as practicable to allow vegetative screening of the base of the poles as seen from the trail.</p>	PG&E to implement as defined	Environmental Monitor site visit to verify compliance	During construction
Vegetation clearing and pruning	<p>MM 15-5*: To minimize the need for excessive vegetation clearing from the power line right-of-way, PG&E will prepare a detailed power line clearing plan for power line Segment 5 (along the Paradise Memorial Trailway) and power line Segment 4 (along Skyway) in consultation with the Town of Paradise that takes into account:</p> <ul style="list-style-type: none"> Basic principles of feathering and scalloping the power line easement. Pruning ponderosa and foothill pine trees where possible along the sides of the power line easement rather than removing them. Retaining lower vegetation under power line conductors based on current clearance guidelines. <p>Prior to clearing activities, PG&E will identify and tag in the field those trees and major shrubs (taller than 10 feet) to be removed, trees to be pruned, and trees to remain within the power line easement. PG&E shall continue to coordinate with and seek input from the Town of Paradise, Butte County, and</p>	PG&E to provide clearing plan to CPUC and Town of Paradise for review	CPUC and Town of Paradise to review plan	Prior to construction

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	the Paradise Fire Department.			
View of Paradise Substation from Paradise Memorial Trailway	MM 15-6: To reduce the contrast and dominance of the Paradise Substation as seen from the Paradise Memorial Trailway and the Paradise High School baseball field, PG&E will paint the existing block wall a non-contrasting, and non-reflective (i.e., flat) color to match the foreground color of the ponderosa pine forest. PG&E will select colors as determined in the field using the Munsell Soil Color Coding.	PG&E to implement as defined	Environmental Monitor site visit to verify compliance	During construction

*Indicates that measure has been modified since PG&E submitted its PEA to the CPUC in January, 2000.